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Economic and Commercial Analysis of the Pelagic Fishery in Quebec, 1991

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Economic and Commercial Analysis of the Pelagic Fishery in Quebec, 1991

Guy Lalande, Economist
Economic Service Division

Economics, Statistics and Informatics Branch
Department of Fisheries and Oceans
Quebec Region
Quebec City, Quebec
G1K 7Y7

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EXECUTIVE SUMMARY

1991 was a difficult year in the pelagic fishery, particularly for herring. Weaker Japanese demand for frozen herring roe and increased Irish competition on this market were the main factors contributing to this situation. Capelin's performance was even more problematic owing to the absence of markets. Mackerel was less vulnerable to market fluctuations thanks to CIDA's purchases under its food aid program. In this context, Quebec processors cut back on their herring purchases, while fishermen saw their earnings decline.

SOMMAIRE EXÉCUTIF

Les pélagiques, et plus particulièrement le hareng ont connu en 1991 une année difficile. La baisse de la demande japonaise pour les oeufs de hareng congelés, combinée à la concurrence accrue de l'Irlande sur ce marché sont les principaux facteurs responsables de cette situation. Le capelan enregistre une performance encore plus problématique en raison de l'absence des marchés. Toutefois, le maquereau est moins sujet aux fluctuations des marchés en raison des achats de l'ACDI dans le cadre de son programme d'aide alimentaire. Dans ce contexte, les transformateurs québécois ont diminué leurs achats de hareng alors que les pêcheurs ont vu leur niveau de rentabilité affecté.

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INTRODUCTION

The purpose of this report is to provide the different fishing industry players in Quebec with a portrait of the commercial situation and the economic impact of the pelagic fishery.

The economic and commercial analysis focuses on three species, herring, mackerel and capelin. To give readers an understanding of the performance of these species in recent years, we will cover the following points: trends in world markets, the processing sector and the performance of pelagic fishing fleets.

Special attention is paid to market issues. Trends in demand and factors contributing to price fluctuations have a considerable impact on the performance of the pelagic fishery in Quebec.

We wish to thank the Statistics Division of the Department of Fisheries and Oceans in Quebec for co-operating in the production of this report.

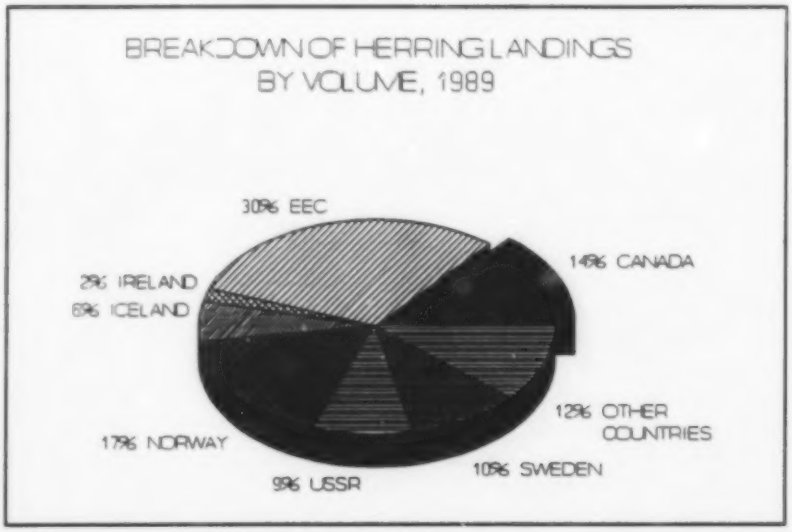
TERTIARY SECTOR

A. HERRING

1. SUPPLY OF HERRING

1.1 World Landings of Herring

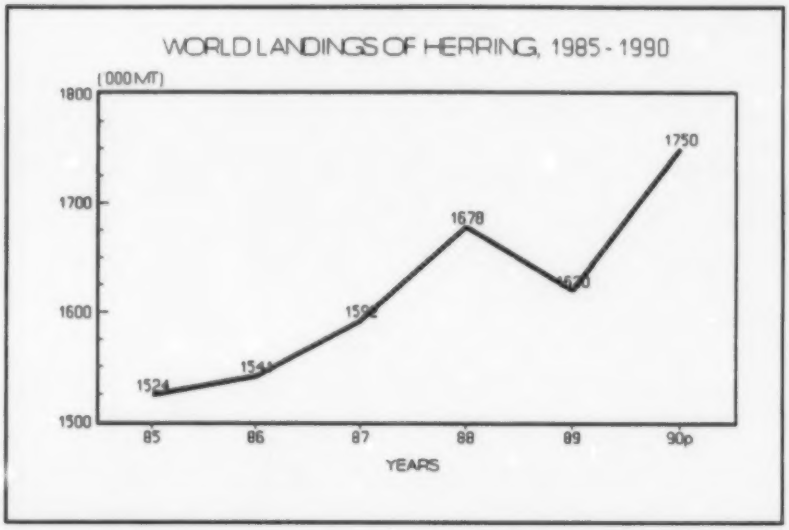
Graph 1



European countries, in particular, the members of the European Economic Community (EEC)[1], landed the most herring, with 30% of the world total, followed by Norway and Canada. Although Ireland, an EEC country, accounts for only 2% of world landings, it is an important player since its catches are destined mainly for the Japanese roe market. The Québec share of Canadian landings is 2.5%; on its own, the province has no influence on world markets.

[1] Includes Belgium, Great Britain, Denmark, Spain, France, Germany, Holland, Greece, Ireland, Italy, Luxembourg and Portugal.

Graph 2

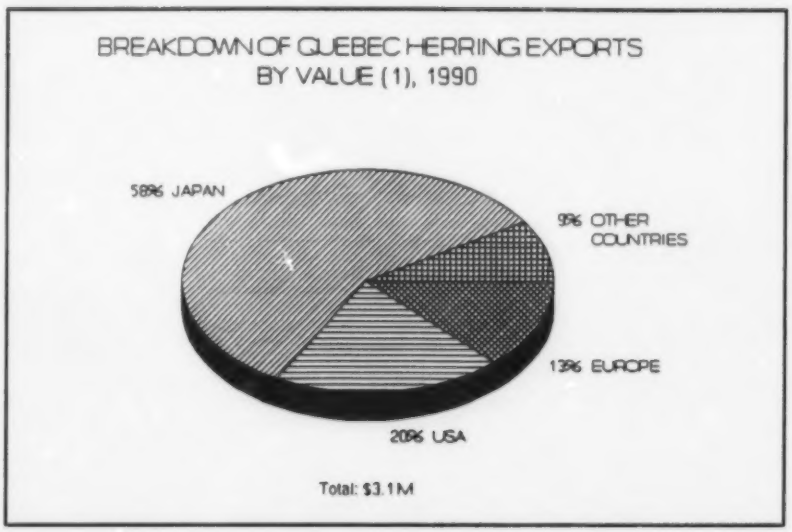


World landings have shown an upward trend since 1985, except in 1989, when catches decreased by 3% from the previous year. This decline was caused by the contraction of demand for herring products. In 1990, however, a significant recovery occurred, with EEC countries exceeding their quotas by more than 30%. It appears, nonetheless, that overfishing of herring in the North Sea could have a negative impact on the main producing countries' stocks in the coming years.

2. DEMAND FOR HERRING

2.1 Quebec Exports

Graph 3



In 1990, the Japanese market absorbed 58% of the total value of Quebec exports, with frozen herring roe constituting the sole export. Exports to the second largest market, the United States, consisted primarily of herring oil and meal; however, smoked products show considerable promise for export to the USA as well. On the European market, which purchases 13% of Quebec's herring exports, frozen fillets are the biggest seller. Nonetheless, this market is difficult to penetrate because of the stiff competition.

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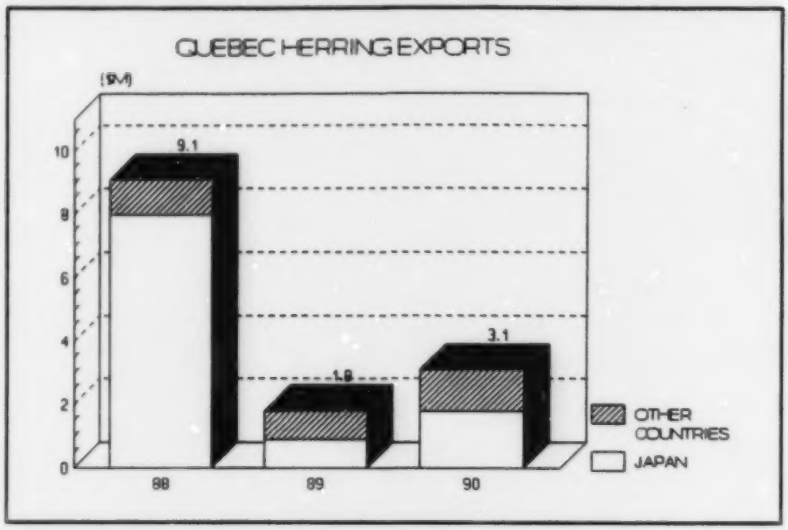
1 Excludes exports of herring bloaters shipped through Quebec.

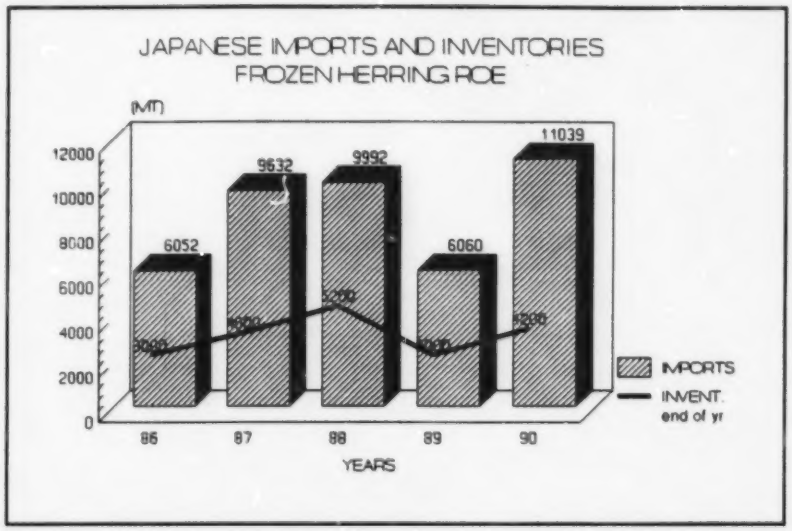
Graph 4



Over the last three years, Quebec herring exports have been affected by the fluctuations in the size of the Japanese market. After exports of frozen herring roe reached a level of over $8 M in 1988, total exports to Japan plunged 80% in 1989 as a result of a decrease in Japanese demand. The revival of Japanese demand in 1990 did not have the expected effect in Quebec, since Japanese importers obtained almost all of their supplies from Nova Scotia. This behaviour by Japanese purchasers is due to their preference for herring caught by means of seines rather than gillnets, the type of gear used in Quebec. Excluding Japan, Quebec exports to other markets totalled approximately $1 M. Exports to those countries held steady because of the low added value of the products exported. In addition, the political and economic problems of some countries, such as Haiti and the Dominican Republic, limited growth of those markets.

2.2 Trends in Japanese Demand

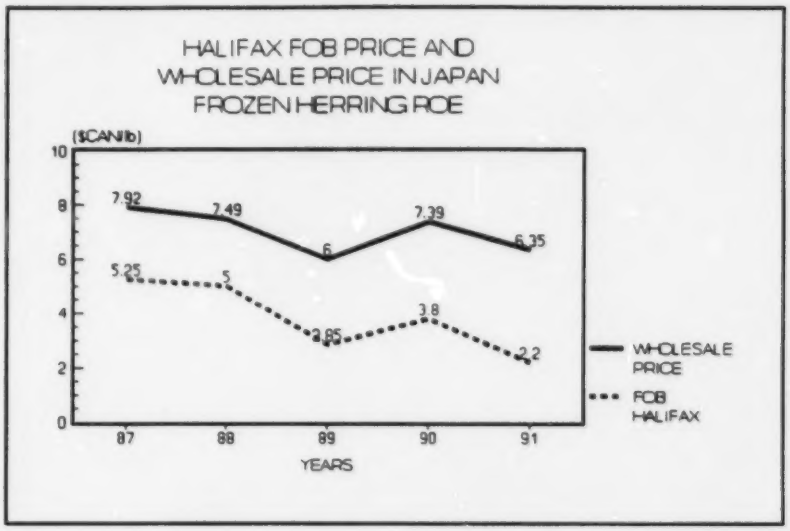
Graph 5



From 1986 to 1988, Japanese imports increased steadily. In 1989, however, reduced consumption of herring roe, combined with high inventory levels, forced Japan to cut its imports of this product by 40%. When the market recovered in 1990, imports reached a record level. This situation can be explained by the advent of competitively priced Irish roe products and Japanese consumers' fondness for herring roe marketed in a variety of flavours. In 1991, Japanese importers showed a much more cautious approach, foregoing speculation on demand and purchasing supplies solely in response to market needs. As a result, Japanese imports should total some 6,400 t, which represents a decline of 40% from 1990. Nearly 30% of the total volume of herring roe imports in 1991 came from Ireland.

2.3 Impact on Prices

Graph 6



The FOB price is the price that Japanese importers pay to Canadian producers when they take possession of products in Halifax. The wholesale price is the price that retailers pay to wholesalers in Japan for a pound of frozen herring roe.

The wholesale price of roe, which is closely tied to fluctuations in Japanese demand, slipped 20% between 1987 and 1991. The FOB price showed the same trend, but with a sharper downward movement, that is, 58% for the same period.

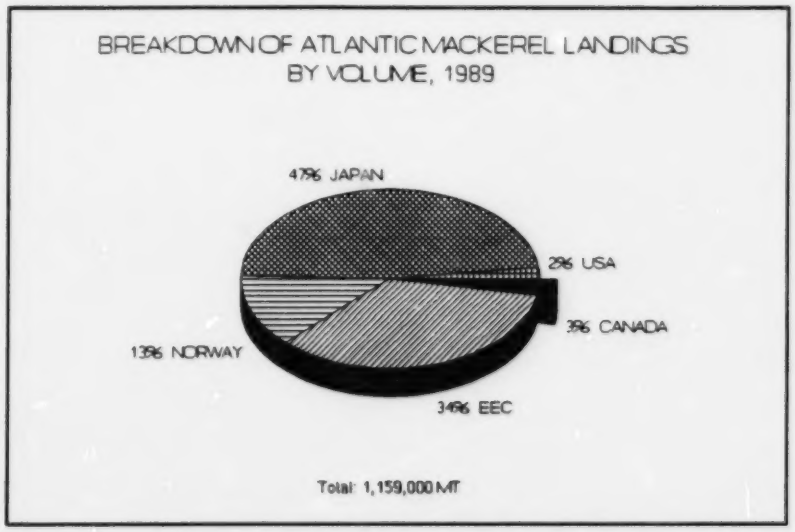
The faster delivery time and lower price of Irish herring roe prompted Japanese buyers to reduce the price paid to Canadian producers. In addition, Japanese processors suffered losses of over $70 M in 1990. As a result of these two factors, the gap between the wholesale price and the FOB price widened in 1990, with an even greater spread occurring in 1991.

B. MACKEREL

1. SUPPLY OF MACKEREL

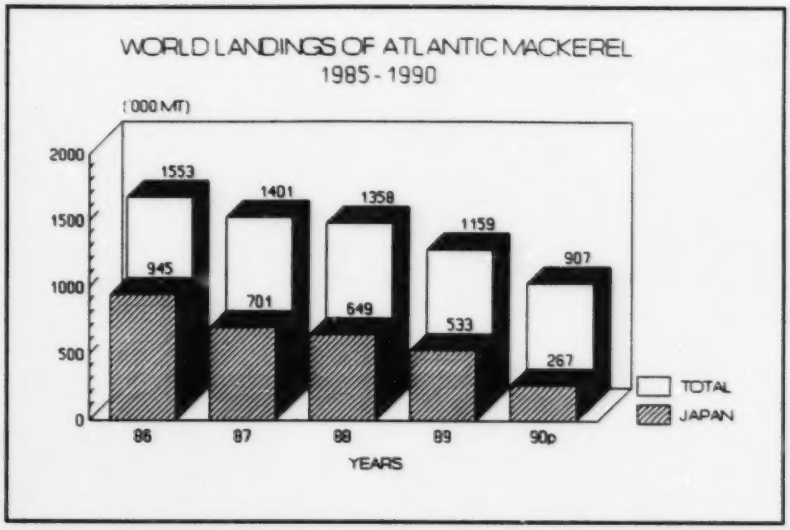
1.1 World Landings of Mackerel

Graph 7



Japan alone accounted for nearly half of the mackerel landings, followed by EEC countries, in particular, Great Britain and Norway. Canada and the United States, for their part, share the same mackerel stocks, but their landings represented only 5% of the world total. However, their underexploited stocks are abundant at present. As for Quebec, its catch comprised nearly 12% of the total Canadian landings.

Graph 8

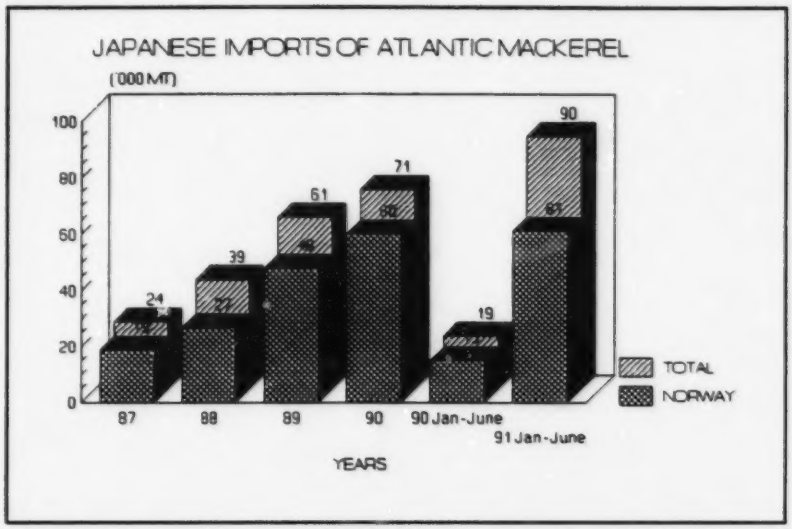


World landings of mackerel have decreased steadily since 1986. This decrease in the supply of mackerel is the result of a reduction in Japanese landings, which fell from 945,000 t in 1986 to 267,000 t in 1990, mainly as a result of overharvesting. Japan's total for 1991 is likely to be about the same as last year, judging from the landed volume as at the end of September. Over the same period, Canada's landings decreased by 24%. Since Canada's sole aim was to meet the demand for bait and CIDA's needs, it made no effort to export this species on a large scale. Consequently, this affected the level of its mackerel landings.

2. DEMAND FOR MACKEREL

2.1 Trends in Japanese Demand

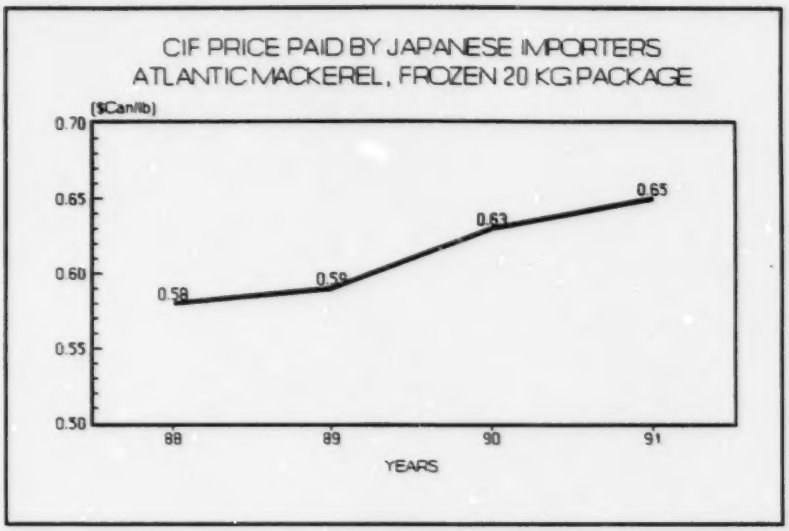
Graph 9



In view of the decrease in its landings and the sustained level of demand for mackerel-based products, Japan was forced to boost its imports. Norway is the country that benefitted most from this situation. Japanese demand for Norwegian mackerel more than tripled between 1987 and 1990. During the first six months of 1991, Norway exported more mackerel to Japan than during the entire 1990 season. On the Japanese market, Norwegian mackerel is prized for its size and its fat content, which ranges from 22% to 24%. By contrast, the fat content of Canadian mackerel varies from 8% to .15%.

2.2 Impact on Prices[2]

Graph 10



Over the last few years, Japan has had to pay higher prices for mackerel because of the increase in its imports. The uptrend in prices has made the product expensive for Japanese consumers, who no longer hesitate to purchase other species, such as salmon, as substitutes. In 1991, a further increase in the price of mackerel prompted Japanese wholesalers to devote special attention to keeping their inventories from reaching too high a level.

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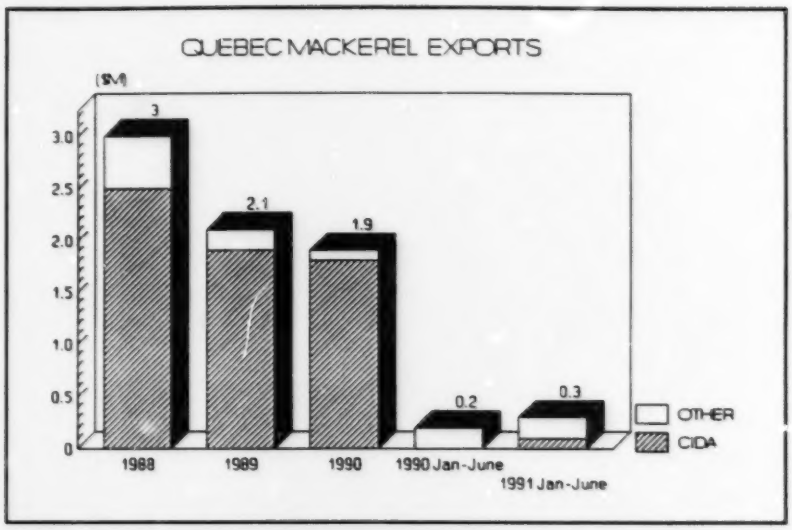
[2] CIF price: transportation and insurance costs are borne by the carrier until the product reaches Japan.

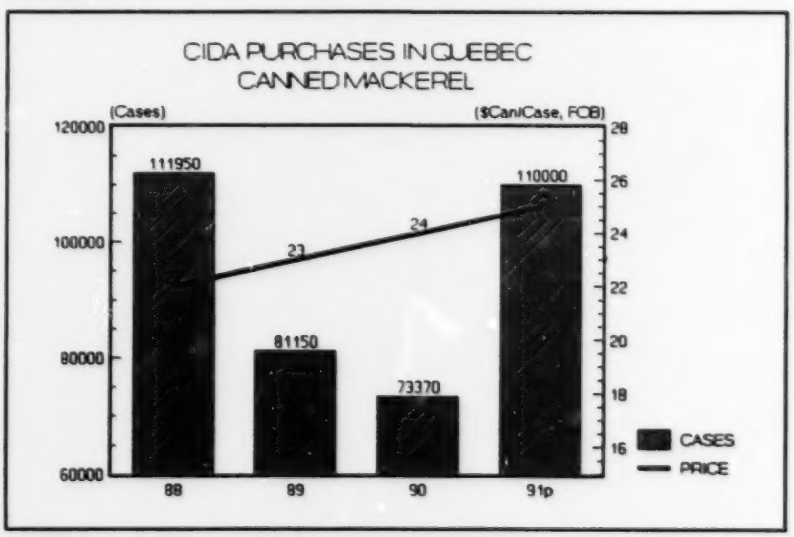
2.3 Quebec Exports

Graph 11



Between 1988 and 1990, the value of Quebec exports dropped about 36% owing to a decrease in availability of the resource. CIDA, through its food aid program, is the biggest purchaser of Quebec mackerel. Most of the agency's purchases, which consist solely of canned mackerel, are shipped to the West Indies and Central America.

Graph 12



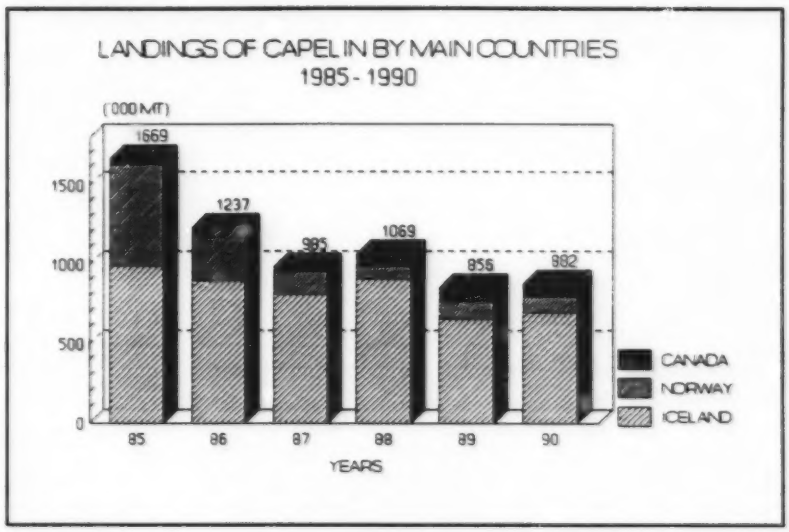
Under its food aid program, which guarantees purchases of $3.5 M, CIDA purchased about 110,000 cases of canned mackerel in 1991. This represents an increase of 50% compared with 1990. Over the two previous years, CIDA's purchases were smaller, namely 81,000 cases in 1989 and 73,400 in 1990 because mackerel landings were lower. Producers earned $25 per case in 1991. Every year since 1987, CIDA has allocated about $1 more per case to offset the increase in processors' production costs.

C. CAPELIN

1. SUPPLY OF CAPELIN

1.1 World Landings of Capelin

Graph 13



Three countries--Iceland, Norway and Canada--account for total world landings of capelin. Iceland lands the most capelin: in 1990, Icelandic vessels landed nearly 700,000 t. In that country, capelin is processed primarily into fish meal. Iceland's landings have declined steadily since 1988 as a result of the precarious state of its stocks.

Norway's catches totalled 94,000 t in 1990, or 6,000 t more than the Canadian total. Norway, like Canada, is interested in the Japanese market for frozen female capelin. In 1991, Iceland's and Norway's capelin production exceeded the demand for this species. Quebec, for its part, has recorded low capelin landings in recent years.

2. DEMAND FOR CAPELIN

2.1 Canadian Exports

In Canada, frozen capelin destined for export comes almost exclusively from Newfoundland. Exports of this product have decreased 45% in value over the past three years as a result of declining Japanese demand. Canada's other markets for capelin are Taiwan and the United States. Taiwanese demand for Canadian capelin has grown rapidly, with the value of exports rising from $4.4 M in 1988 to $5.7 M in 1990.

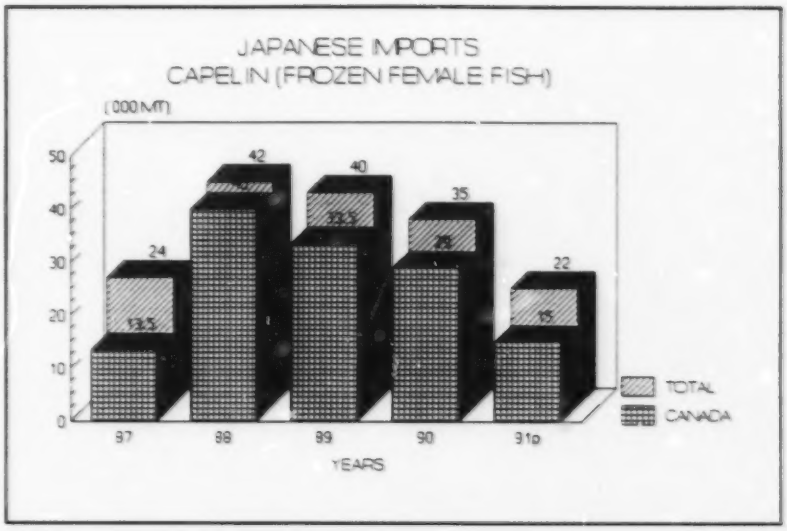
EXPORTS OF CAPELIN
(frozen whole capelin)

Year		Canada (Can $000)	Quebec (Can $000)
1988		66 500	1 300
1989		44 000	2
1990		36 500	26
1990	January-June	2 300	7
1991	January-June	1 100	8

Quebec's share of Canadian exports of frozen capelin is negligible. Its only sales were to the North American market; they consisted of animal feed for zoos.

2.2 Trends in Japanese Demand

Graph 14

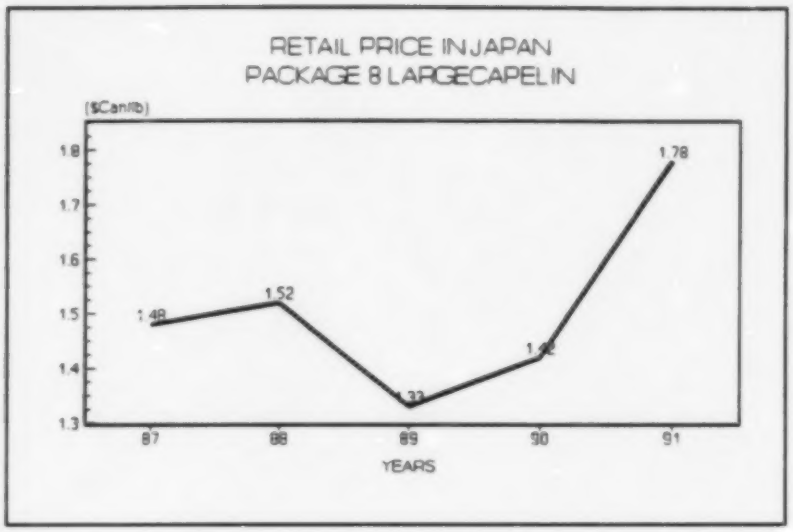


Japan is still Canada's main market for frozen whole capelin with roe. The success of Canada's imports is due to the size of the fish. The Japanese prefer large-sized capelin as opposed to products with a higher fat content, like Norwegian capelin. In 1990, the majority of Canadian exports consisted of 35 fish per kilo. Norway's best exports range from 36 to 40 fish per kilo.

Since 1988, however, Japanese imports have decreased and this trend should become more pronounced in 1991. The high level of stocks, reduced consumption and low returns to producers are factors that Japanese importers now have to take into account. It is expected that in future Japanese purchasers will act in response to market demand rather than seeking to boost their inventories for speculation purposes.

2.3 Impact on Prices

Graph 15



In Japan, as a rule, capelin is sold in packages of eight fish. The retail price has increased by a substantial 34% since 1989. Higher production costs, in particular, for labour and packaging material, have forced Japanese processors to charge much higher prices for their products. At $1.78/lb, the retail price for capelin is considered very high. Consequently, the product is losing ground, since Japanese consumers are turning to less expensive species.

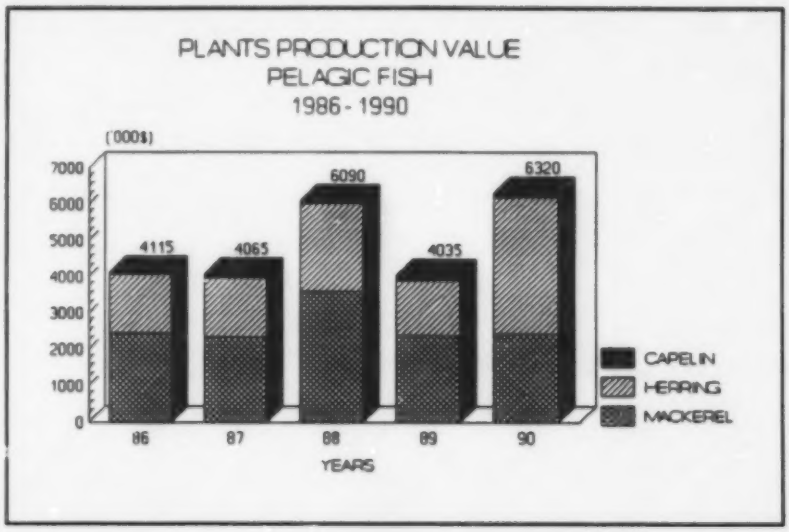
SECONDARY SECTOR

1. IMPACT ON THE SECONDARY SECTOR

1.1 Plant production Value

Graph 16

The value of Quebec plant production peaked in 1988 and 1990. This performance is attributable to the high landings of mackerel in 1988 and herring recorded in 1990.



In 1990, plants in Quebec processed $3.8 M worth of herring. The main products were herring roe, which accounted for nearly half of total production value, followed by bait, with 30%, and fresh and frozen herring. Over the past few years, mackerel processing has been fairly stable. Mackerel production has totalled about $2.5 M, with plants gearing their output mainly to canned mackerel. In 1991, mackerel is expected to be Quebec's top pelagic species in terms of production, given CIDA's purchases and the sharp decline in landings of herring.

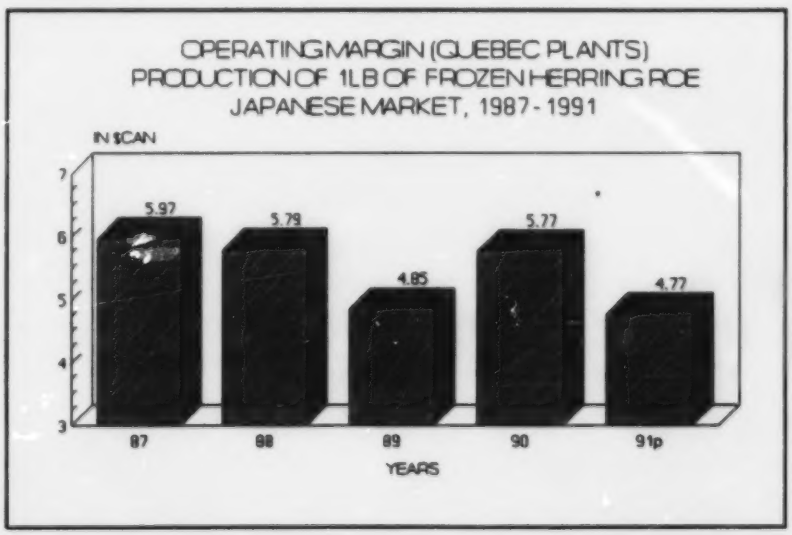
1.2 Operating Margin

The operating margin is the difference between the selling price of a given quantity of product on the market and the cost of the raw materials used to produce it. It represents the amount remaining per unit produced to cover production costs, after deduction of the cost of raw materials.

The operating margin should not be seen as a measure of the financial soundness of processing plants. It simply shows whether it is more profitable to produce a given product under the same conditions from one year to another.

We will confine ourselves to examining the operating margin associated with the production of frozen herring roe. The cost of raw materials is based on a roe yield equal to 6% of the weight of the fish.

Graph 17



The operating margin associated with the production of one pound of herring roe sold in Japan decreased by $1 in 1991, reaching an even lower level than in 1989. In the short term, the trend in the operating margin will depend on the reaction of Japanese purchasers to the Irish product. Another factor that must be considered is Japanese consumers' demand for herring roe products.

1.3 Production Costs for Canned Mackerel

This table shows the 1990 production cost for a can of mackerel, which is the product that CIDA purchases under its food aid program.

PRODUCTION COSTS[1]
CANNED MACKEREL
(400 grams)

INPUT	COSTS
RAW MATERIALS	$0.150
INGREDIENTS	$0.066
PROCESSING	$0.740
Labour	
Electricity	
Machinery	
Cans	
LABELS	$0.025
TRANSPORTATION	$0.060

Little processing is required to produce canned mackerel. Companies participating in the CIDA program receive $1.04 per can produced, the amount they need to cover their production costs. Prospects for generating returns from this product remain poor because of the purchasing countries' limited ability to pay for their purchases.

---

[1] Source: Project on mackerel catches, landings and processing carried out for Pêcheries Hubert Inc.

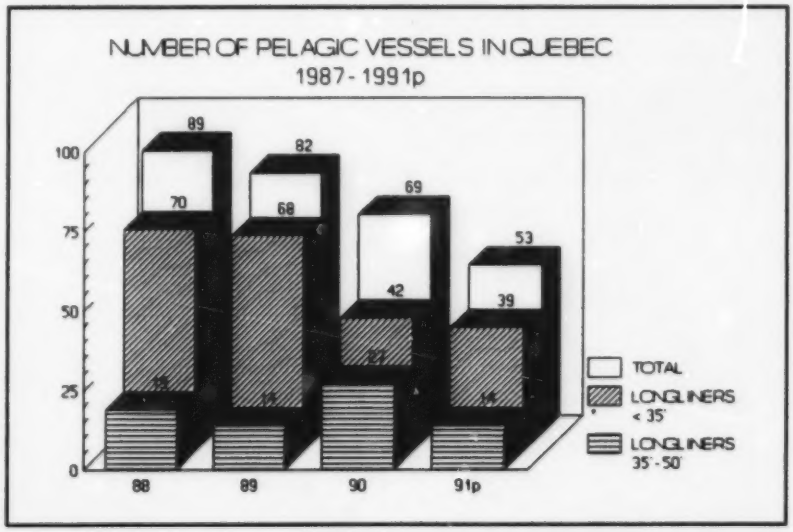
PRIMARY SECTOR

1. FISHING FLEETS

In Quebec, the pelagic fishing fleets are made up of longliners under 35 feet in length and longliners from 35 to 50 feet long. These two fleets' catches represented 44% of the total quantity of pelagic fish landed by Quebec fishing enterprises in 1990. Over the past few years, the quantities landed by these fleets have depended largely on fluctuations in landed prices.

1.1 Trends in the Composition of the Fishing Fleet

Graph 18



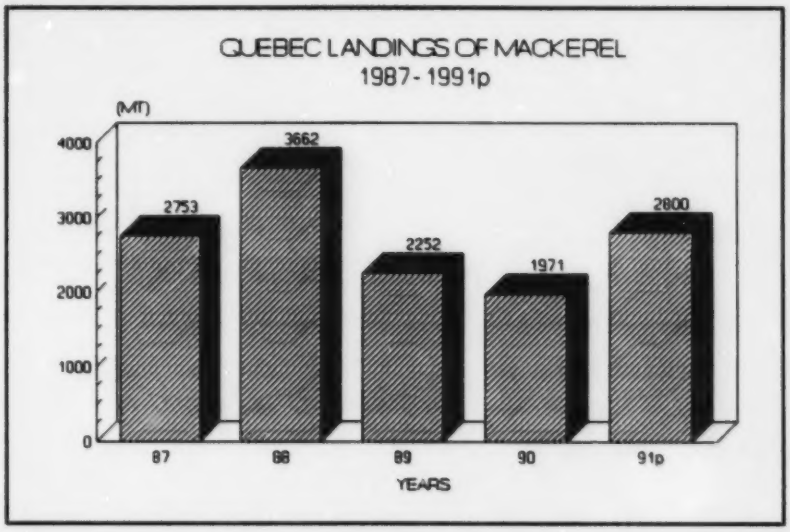
The number of vessels whose landings, in value, were composed of 50% pelagics has decreased by 40% over the past four years. Longliners under 35 feet are to blame for this decline; the fleet had 31 fewer boats in 1991 than it did in 1988. During this period, the number of longliners 30 to 50 feet in length remained fairly stable, except in 1991, when exceptional catches of herring prompted some vessels to concentrate their efforts on this species.

Fishing effort by pelagic longliners increased by more than 70% between 1989 and 1990, with only a slight decline recorded this year.

1.2 Landings of Pelagic Fish

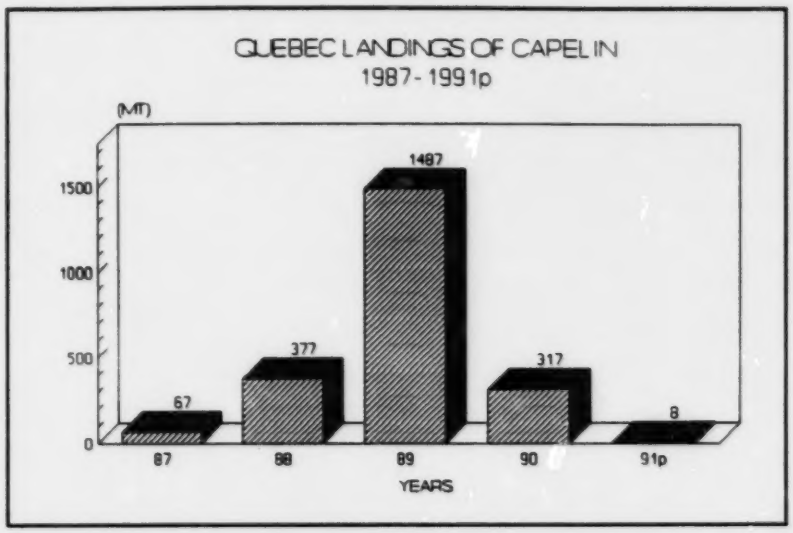
1991 was a difficult year for pelagics, with cumulative landings of herring, mackerel and capelin showing a decline of nearly 30%. Landings of the three species declined from 8,555 t in 1990 to just over 6,000 t in 1991.

Graph 19



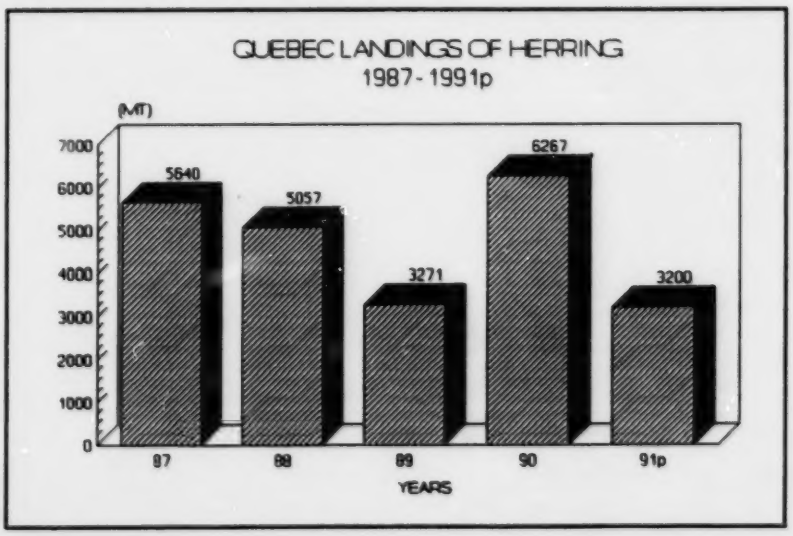
Mackerel is the only species that showed positive results, with a 42% increase in landings over the 1991 level. This year's catches are nonetheless lower than in 1988, when record landings of 3,660 t were posted. Mackerel fishing is carried out primarily to meet the demand for bait and the needs of CIDA, which pays better prices.

Graph 20



Over the past few years, landings of capelin have never topped 400 t, except in 1989. This species' small size, that is, over 40 fish per kilo, and its limited commercial prospects, are the reason that it is still underexploited in Quebec. Given the decrease in landed prices have decreased, which is one of the consequences of this situation, fishermen have not been inclined to harvest this resource.

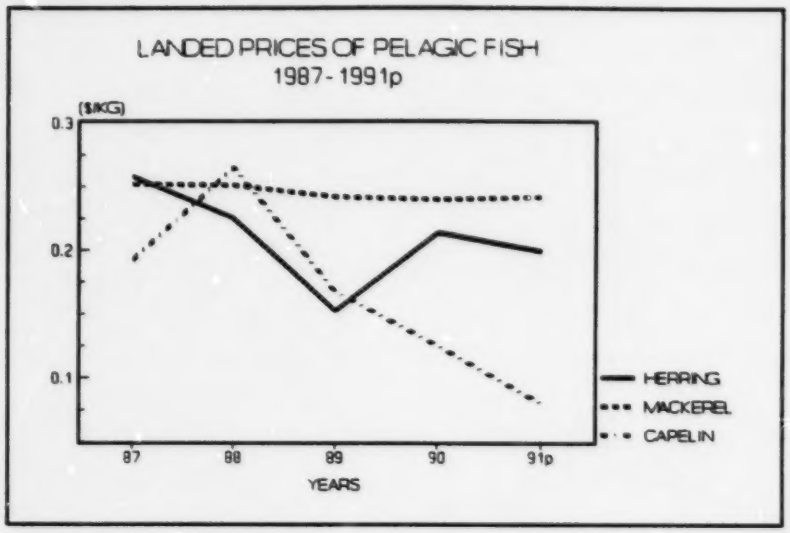
Graph 21



1991 was a difficult year for herring, with landings of this species posting a drop of 50% compared to 1990. The Gaspé South area, where most herring catches are concentrated, was hardest hit. In this marine fishing sector, landings declined from 4,700 t in 1990 to 2,750 t this year. Deteriorating market conditions and declining landed prices are to blame for this poor performance.

1.3 Landed Prices

Graph 22



An analysis of the trends in landings prices for pelagics shows that only the price of mackerel has remained stable. The stability of prices paid to fishermen over the past few years is attributable to CIDA's food aid program. It should be noted that a large portion of CIDA's purchases are made in the Magdalen Islands.

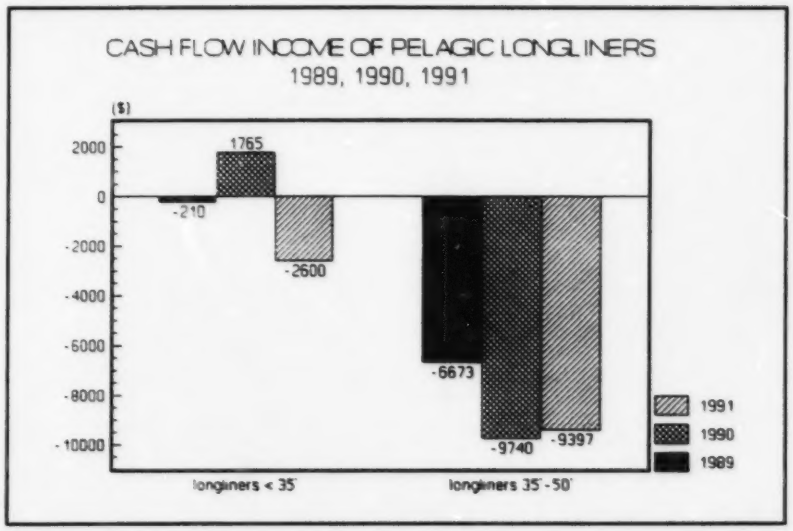
As regards herring, the price paid to fishermen has a direct influence on the quantities landed. Since 1987, herring catches have shown the same trends as landed prices. As a rule, the price depends on the state of the Japanese roe market. This year's contraction in Japanese demand pushed prices down.

Landed prices for capelin have dropped by 70% since 1988, reflecting the difficult market conditions for this species.

1.4 Cash Flow Income

Net cash flow is the before-tax salary of the skipper-owner. It is calculated based solely on funds received and paid out during the fiscal year. It provides a picture of financial performance during the period in question.

Graph 23



Both fleets of pelagic longliners posted negative cash flow results for 1991. The prevailing context of declining landed prices combined with a significant decline in herring catches had a strong impact on fishermen's earnings. Operating costs remained high--a situation which is consistent with the considerable fishing effort by longliners under 35 feet and those 35 to 50 feet in length. However, longliners 35 to 50 feet in length are in a more critical position. In 1991, the skipper-owners of this fleet recorded negative cash flow for the third consecutive year.

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Department of Fisheries and Oceans - Quebec Region

(NOVEMBRE 1991)

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P.O. Box 15 500
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